REMARKS

In response to the Office Action of May 1, 2007, Applicant amends the application and seeks reconsideration thereof. Claims 38-47, 58-67, 126-134, and 144-151 are pending (4 independent and 37 total claims). Claims 38, 41, 46, 58, 60-61, 65-67, 126, 128-134, and 144-151 have been amended. This response cancels claims 1-37, 48-57, 68-125, 135-143 and 152-177, without prejudice or disclaimer. No claims have been added.

Drawing objections

The Examiner has objected to the drawings and to Fig. 7b, in particular. The Examiner suggested that "dynamic forward error correction encoder" (751) be called a "dynamic forward error correction code/preamble encoder". The Examiner also suggested that "dynamic forward error correction decoder" (765) be called "dynamic forward error correction code/preamble decoder."

Although Applicant respectfully disagrees with the Examiner as to the need for the change, Applicant has amended the drawings to reflect the suggested language. Applicant therefore requests withdrawal of the objection to the drawings.

Specification objections

The Examiner objected to the Abstract as lacking a technical disclosure of the improvement. The Applicant respectfully disagrees, but herewith submits an amended Abstract including further technical disclosure of the improvement. The Applicant respectfully submits that the Abstract is now acceptable, and respectfully requests this objection be withdrawn.

The Examiner objected to the specification and suggests that "dynamic forward error correction encoder" (751) be changed to "dynamic forward error correction code/preamble encoder." And that 'dynamic forward error correction code/preamble decoder" (765) be changed to "dynamic forward error correction code/preamble decoder." Although Applicant respectfully disagrees with the Examiner as to the need for the change, Applicant has amended the specification to reflect the suggested language. Applicant therefore requests withdrawal of this objection to the specification.

Claim Rejections - 35 U.S.C. § 112

The Examiner rejects claims 38-47, 58-67, 126-134 and 144-151 under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Specifically in claims 38 and 58, Applicants have amended the claims substantially along the lines suggested by the Examiner.

In claims 38, 40, 42, 44-46, The Examiner has objected to the term "encoder" and "decoder" and suggests "encoding means" and "decoding means" as replacements. The Applicant respectfully traverses this objection as overly limiting of the encoder and decoder as it is described and claimed in the application. The Applicant submits that the terms encoder and decoder are proper as defined in the specification of the present application (see, e.g., Fig. 6B) and respectfully requests this and all objections to the use of encoder and decoder be withdrawn.

With respect to the various objections to claims 60, 61, 65, 66, 67, 126, 128, 129, 131, 132, 133, 134, 144, 145, 146, 147, 148, 149, 150, and 151, Applicants have

amended the claims substantially along the lines suggested by the Examiner or with minor amendments for clarification. Thus, Applicant respectfully requests that the 35 U.S.C. §112 rejections be withdrawn.

Claim Rejections - 35 U.S.C. § 102(b)

The Kiriyama document

The Examiner rejects claims 38-42, 44-47, 58-65, 67, 126-129, 144-149 and 151 under 35 U.S.C. 102(b), as being anticipated by U.S. Patent No. 5,856,988 to Kiriyama. The Applicant respectfully traverses.

As best understood, Kiriyama describes a system where an "error correcting code" is not used if data frame transfer can be conducted without any errors. If data frame errors occur during data transmission, then the system implements an "error correcting code." Even though Kiriyama discloses a cell-loss error correction code, a cell bit error correction code, or no error correction code, all of these are provided using one error correction method. Kiriyama does not disclose more than one error correction method, and moreover Kiriyama certainly does not disclose dynamically changing a preamble to indicate dynamically which forward error correction methods are used.

Moreover, Kiriyama only uses one type of error correction code for one type of error regardless of changes in the channel error condition. For example, Kiriyama uses the same cell bit error correction code regardless of how severe or mild the error condition, regardless of the cause of the error condition, and regardless of whether one method or another would better handle the error condition on that communication channel at the moment. Kiriyama would use the same cell bit error correction code

regardless of what the particular noise pattern, attenuation, or interference encountered on the communication channel.

Thus, Kiriyama does not teach suggest or disclose, "A system for sending segments using different forward error correction methods on a network ... wherein said sending network node further comprises a dynamic forward error correction encoder which generates said one or more data segments; and ... wherein the system is configured to select a forward error correction method, from among more than one forward error correction methods, based on network error conditions of a communication channel associated with said sending network node, wherein said forward error correction method is selected to adapt dynamically to changing network error conditions; and wherein at least one of (1) the choice of error correction method and (2) the amount of error correction, depends upon the number of errors and the type of errors on the network," as recited in amended claim 38. (Emphasis added.) Thus, claim 38 is not anticipated by Kiriyama and Applicant requests allowance of claim 38. Claims 39-47 variously depend from claim 38 and are also allowable for the same reasons in addition to their own novel features.

Similarly, Kiriyama does not teach suggest or disclose, "A system for receiving segments using different forward error correction methods on a network ... wherein said receiving network node further comprises a dynamic forward error detection decoder which decodes said one or more data segments; and ... wherein the system is configured to dynamically utilize different forward error correction methods selected, from among more than one forward error correction methods, based on network error conditions of a communication channel associated with said receiving network node, wherein said

forward error correction method is selected to adapt dynamically to changing network error conditions; and wherein at least one of (1) the choice of error correction method and (2) the amount of error correction, depends upon the number of errors and the type of errors on the network," as recited in amended claim 58. (Emphasis added.) Thus, claim 58 is not anticipated by Kiriyama and Applicant requests allowance of claim 58. Claims 59-67 variously depend from claim 58 and are also allowable for the same reasons in addition to their own novel features.

Similarly, Kiriyama does not teach suggest or disclose, "A method for sending segments using different forward error correction methods on a network comprising: A. selecting a forward error correction method and an associated preamble, wherein said forward error correction method is selected, from among more than one forward error correction methods, based on network error conditions of a communication channel associated with a sending network node, wherein said forward error correction method is selected to adapt dynamically to changing network error conditions, and wherein at least one of (1) the choice of error correction method and (2) the amount of error correction, depends upon the number of errors and the type of errors on the network; B. adding forward error correction to segment data; and C. sending said associated preamble, which identifies said forward error correction method and contains said segment data, from said sending network node across a time division multiplexed network," as recited in amended claim 126. (Emphasis added.) Thus, claim 126 is not anticipated by Kiriyama and Applicant requests allowance of claim 126. Claims 127-134 variously depend from claim 126 and are also allowable for the same reasons in addition to their own novel features.

Similarly, Kiriyama does not teach suggest or disclose, "A method for receiving segments using different forward error correction methods on a network comprising: A. receiving a preamble and segment data encoded with forward error correction on a receiving network node on a time division multiplexed network; and B. determining a forward error correction method based on said preamble; wherein said forward error correction method is selected, from among more than one forward error correction methods, based on network error conditions of a communication channel associated with said receiving network node, wherein said forward error correction method is selected to adapt dynamically to changing network error conditions; and wherein at least one of (1) the choice of error correction method and (2) the amount of error correction, depends upon the number of errors and the type of errors on the network," as recited in amended claim 144. (Emphasis added.) Thus, claim 144 is not anticipated by Kiriyama and Applicant requests allowance of claim 144. Claims 145-151 variously depend from claim 144 and are also allowable for the same reasons in addition to their own novel features.

The Guha document

The Examiner rejects claims 38, 39, 41, 58, 59 and 62-64 under 35 U.S.C. 102(b), as being anticipated by U.S. Patent No. 5,699,369 to Guha. The Applicant respectfully traverses this argument.

Guha discloses a method of determining the feasibility that the FEC can compensate for the expected number of burst errors. Guha describes a system that determines the amount of forward error correction required to get valid data transfer thereby eliminating or minimizing the need for ARQ. The main purpose being to reduce

latency by requiring few or no ARQ's. Guha describes the ability to "dynamically compute the correction overhead" or "the FEC code overhead is dynamically computed", but does not teach or suggest that the choice of segment size is dynamic or that the header size is dynamic, nor dynamic choice of forward error correction methods.

Applicant emphasizes that the sending of no error correction code when there is no error and the sending of an error correction code at appropriate times is not what is meant by "dynamically utilizing different forward error correction methods" as described in the specification of the present application. Rather, the specification is replete with references to dynamically selecting between more than one method of error correction, which Guha does not do.

Thus, Guha does not teach suggest or disclose, "A system for sending segments using different forward error correction methods on a network ... wherein said sending network node further comprises a dynamic forward error correction encoder which generates said one or more data segments; and ... wherein the system is configured to select a forward error correction method, from among more than one forward error correction methods, based on network error conditions of a communication channel associated with said sending network node, wherein said forward error correction method is selected to adapt dynamically to changing network error conditions; and wherein at least one of (1) the choice of error correction method and (2) the amount of error correction, depends upon the number of errors and the type of errors on the network," as recited in amended claim 38. (Emphasis added.) Thus, claim 38 is not anticipated by Guha and Applicant requests allowance of claim 38. Claims 39-47 variously depend

from claim 38 and are also allowable for the same reasons in addition to their own novel features.

Similarly, Guha does not teach suggest or disclose, "wherein the system is configured to dynamically utilize different forward error correction methods selected, from among more than one forward error correction methods, based on network error conditions of a communication channel associated with said receiving network node, wherein said forward error correction method is selected to adapt dynamically to changing network error conditions; and wherein at least one of (1) the choice of error correction method and (2) the amount of error correction, depends upon the number of errors and the type of errors on the network," as recited in amended claim 58. (Emphasis added.) Thus, claim 58 is not anticipated by Guha and Applicant requests allowance of claim 58. Claims 59-67 variously depend from claim 58 and are also allowable for the same reasons in addition to their own novel features.

Claim Rejections - 35 U.S.C. § 103(a)

The Examiner rejects claims 40, 42-47, 60, 61, 65-67, 126-134 and 144-151 under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent No. 5,699,369 to Guha. The Applicant respectfully traverses this argument.

With the exception of claim 126, each of the claims rejected under section 103 is dependent upon a claim that is allowable for the reasons discussed above. Addressing claim 126 specifically, and this obviousness rejection in general, Applicant notes that the Examiner states that "Guha does not disclose using a preamble for the selected." Bottom of Page 8. This statement is unclear and Applicant can only guess at the Examiner's

argument, for the claim language of claim 126 does not appear to track what the Examiner started to write here. Moreover, to facilitate an accurate response to the Office Action, Applicants request that any obviousness rejection involving Official Notice track the exact language of a specific claim in order to be understood.

Applicant re-asserts that Guha contains no teaching or suggestion that the choice of segment size may be dynamic, that the header size may be dynamic, nor of dynamic choice of forward error correction methods. Because Guha does not disclose "selecting a forward error correction method," then Guha can not disclose, teach or suggest sending a preamble that identifies the forward error correction method that was selected. In other words, a reference that does not teach dynamic choice of forward error correction methods can not be used as a basis for a 103 rejection of dynamic choice of forward error correction methods (in connection with a preamble).

Specifically, Guha does not teach, suggest or disclose, "A method for sending segments using different forward error correction methods on a network comprising: A. selecting a forward error correction method and an associated preamble, wherein said forward error correction method is selected, from among more than one forward error correction methods, based on network error conditions of a communication channel associated with a sending network node, wherein said forward error correction method is selected to adapt dynamically to changing network error conditions, and wherein at least one of (1) the choice of error correction method and (2) the amount of error correction, depends upon the number of errors and the type of errors on the network; B. adding forward error correction to segment data; and C. sending said associated preamble, which identifies said forward error correction method and contains said segment data, from said

sending network node across a time division multiplexed network," as recited in amended claim 126. (Emphasis added.) Thus, claim 126 is not obvious over Guha and Applicant requests allowance of claim 126. Claims 127-134 variously depend from claim 126 and are also allowable for the same reasons in addition to their own novel features.

CONCLUSION

In view of the foregoing, it is believed that claims 38-47, 58-67, 126-134, and 144-151 are in condition for allowance. A Notice of Allowance is earnestly solicited at the earliest possible date. If the Examiner believes that a telephone conference would be useful in moving the application forward to allowance, the Examiner is encouraged to contact the undersigned.

If necessary, the Commissioner is hereby authorized to charge payment or credit any overpayment to Deposit Account No. 1928-14 for any additional fees required under 37 C.F.R. §§ 1.16 or 1.17, particularly extension of time fees.

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Respectfully submitted,

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